

**Features :**

- Transceiver with AutoDirection Control
- Operating voltage: 3.3V/5.0V
- I/O-Isolation3000 VDC
- Baud rate : 500Kbps(MAX)
- Bus protection
- Quiescent Current: 35mA(Typ)
- No External Components Required
- ESD Protection ( Contact : ±4KV ; Air : ±8KV )
- Operating temperature : -40 ~ +85
- Input reverse connect protection



**Description**

RE485 series is the fully isolation and half duplex transceiver, which integrates with the power isolation, electrical isolation, the RS-485 interface chip and the bus protection function. It is suitable for the data transmission for bidirectional data communication or multi node bus, The maximum transmission data rate is up to 500Kbps. It is built-in isolated DC/DC inverter, with the isolation voltage up to 3000V, It is small, no need peripheral circuit, convenient to embed the user equipment. The bus is with the ESD protection function, meets the standard of IEC61000-4-2.

**Model Selection Guide**

Order Code	Input Voltage		Baud rate (Kbps)	Input reverse connect protection	Isolated output power supply
	Vin(VDC)	Range(VDC)			
RE3485HT	3.3	3.17-3.45	500	Yes	No
RE3485PHT			500	Yes	Yes
RE485HT	5.0	4.75-5.25	500	Yes	No
RE485PHT			500	Yes	Yes

**Parameter**

Item	Specification	Min	Typ	Max	Units
Input Voltage		3.17	3.3	3.45	VDC
		4.75	5.0	5.25	VDC
Output Voltage	Pin 7		5.3		VDC
Output Current	Pin 7			110	mA
Operating Temperature		-40		+85	
Storage Temperature		-55		+125	
Isolation voltage			3000		VDC
Isolation capacitance			40		pF
Humidity		10		95	%
Quiescent Current			32		mA
Device Amounts				256	Point
Propagation delay time		50		100	μS
CON pin current				5	mA
ESD Protection	Contact			±4	KV
	Air			±8	KV

**Receiver Function**

Input(V <sub>A-B</sub> )	Output(RXD)
V <sub>A-B</sub> +0.2VDC	1
V <sub>A-B</sub> -0.2VDC	0

**Driver Function**

Input(TXD)	Output(A)	Output(B)
1	1	0
0	0	1

**Application**

Application Area	Typical Circuit
<ul style="list-style-type: none"> <li>→ Industry control</li> <li>→ Automatic control on electrical power system</li> <li>→ Building Control Systems</li> <li>→ Communication</li> <li>→ Programmable Logic Controller</li> <li>→ Mining</li> </ul>	

**EMC Recommended Circuit**

Component	Parameter
C1	110uF/16V
C2	110uF/16V
C3C4	1uF/100V
C5	1nF/2KV
R1R2	10 Ω/2W
R3	1M
L1	5-10uH
L2	220mA (Common mode Choke )
TVS1 TVS2	5.1V
TVS3 TVS4	5.1V
GDT1 GDT2	S30-A90X

**Mechanical Dimension/Pin Connections**

Bottom View

Lateral View

Pin	Function	Description
1	+Vin	Positive pole
2	GND	Negative pole
3	TXD	Driver input data
4	RXD	Receiver output data
7	+Vo	Isolated positive (with suffix"P" )
8	B	RS485 B pin
9	A	RS485 A pin
10	RGND	RS485 Bus Isolated Ground

Units : mm ( inch )  
Tolerances : ±0.25mm ( ±0.01inch )